

**SYSTEM AND METHOD FOR CONDITIONAL TRACING OF COMPUTER  
PROGRAMS**

**Abstract of the Disclosure**

5       A software system is disclosed which facilitates the process of tracing the execution paths of a program, called the client. The tracing is performed without requiring modifications to the executable or source code files of the client. Trace data collected during the tracing operation is collected according to instructions in a trace options file. At run time, the tracing library attaches to the memory image of the client. The tracing library is configured to monitor execution of the client and to collect trace data, based on 10 selections in the trace options file. Conditional tracing, through the use of triggers and actions taken in response to the triggers, allows the developer to control the tracing operation. The triggers can be conditional triggers in which the corresponding action is taken only if a conditional expression is satisfied. The system can trace multiple threads and multiple processes. The tracing system provides a remote mode and an online mode. 15       In remote mode, the developer sends the trace control information (which can include triggers and corresponding actions) to a remote user site together with a small executable image called the agent that enables a remote customer, to generate a trace file that represents execution of the client application at the remote site. In online mode, the developer can generate trace options (including triggers and corresponding actions), run 20 and trace the client, and display the trace results in near real-time on the display screen during execution of the client program.

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